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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,350	10/14/2003	Takashi Hasebe	03622/LH	6699
1933	7590	11/02/2005	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC			LIANG, LEONARD S	
220 5TH AVE FL 16			ART UNIT	
NEW YORK, NY 10001-7708			PAPER NUMBER	
			2853	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,350

Applicant(s)

HASEBE ET AL.

Examiner

Leonard S. Liang

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/29/04, 06/07/04, 08/03/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Specifically, the applicant is required to match all references in the drawings to the references in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-13 and 18-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 10, the language "the at least one rotary drum comprises two said rotary drums" is confusing. First of all, it is not clear what the applicant means by a rotary drum comprising two rotary drums. Does this mean that there are three drums total: one big one and two small ones comprised by the big one? Based on the elected figure, it would appear that the applicant would want to claim a first rotary drum and a second rotary drum. But it is not clear how the at least one rotary drum can further comprise two rotary drums. Furthermore, the language "two said rotary drums" is confusing because the operator "said" in claim 5 is used to describe the one rotary drum and not any rotary drums further comprised by that one drum.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

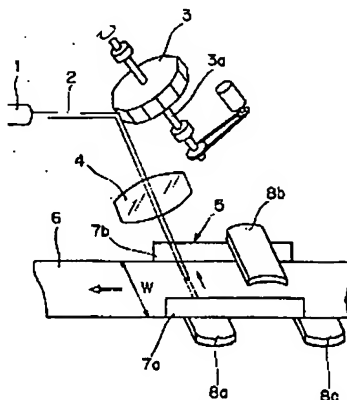
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishitani (JP Pat 07144403 A).

Nishitani discloses:

- {claim 1} An ink jet printer comprising: a printing-head which discharges photo-curing ink toward a printing sheet (paragraph 0001-0003); light irradiation means for irradiating an ink landing surface of the printing sheet with light, wherein the light irradiation means irradiates the ink landing surface by optical scanning via a reflecting mechanism with rays having a wavelength range in which the photo-curing ink is cured (figure 1; abstract)



- {claim 2} wherein the reflecting mechanism comprises a polygon reflecting mirror (figure 1, reference 3)

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- {claim 3} wherein the reflecting mechanism comprises a swingable reflecting mirror (figure 1, reference 3)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

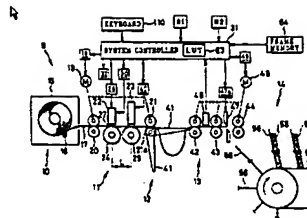
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

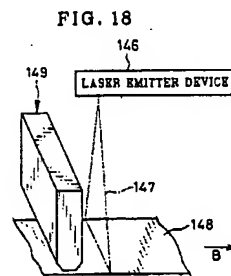
Claims 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsumodo et al (US Pat 6523948).

Matsumodo et al discloses:

- {claim 5} An image printing apparatus of an ink jet printing system (figure 1); at least one rotary drum adapted to have a printing sheet wound thereon (figure 1, reference 24-25); at least one ink jet printer which discharges photo-curing ink in order to print an image on the printing sheet wound around a corresponding said rotary drum (figure 18, reference 149; column 14, lines 11-34); and at least one irradiation optical path along which rays having a wavelength at which the photo-curing ink is cured are irradiated to an image printing surface of the printing sheet (figure 18, reference 146, 147, column 14, lines 11-34)



- {claim 6} a printing-head which discharges the photo-curing ink toward the printing sheet (figure 18, reference 149); light irradiation means for irradiating the image printing surface of the printing sheet with the rays, and wherein the light irradiation means irradiates the image printing surface by optical scanning via a reflecting mechanism with the rays (figure 18, reference 146, 147; column 14, lines 11-34)



- {claim 7} wherein the reflecting mechanism comprises a polygon reflecting mirror (column 14, line 22)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 4 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishitani (JP Pat 07144403 A) in view of Imakawa et al (US Pat 5432537).

Nishitani discloses, with respect to claims 4 and 14-15, an ink jet printer (as applied to claims 1-3 above).

Nishitani differs from the claimed invention in that it does not disclose further comprising detection means for detecting a light quantity, and light quantity control means for controlling an irradiation energy amount on the basis of the detected light quantity.

Imakawa discloses an optical detection and light quantity control means (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Imakawa into the invention of Nishitani. The motivation for the skilled artisan in doing so is to gain the benefit of optimizing the amount of energy used depending on the situation at hand.

Claims 8-9 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (US Pat 6523948) in view of Imakawa et al.

Matsumoto et al discloses, with respect to claims 8-9 and 16-17, an apparatus (as applied to claims 5-7 above).

Matsumoto et al differs from the claimed invention in that it does not disclose:

- {claim 8} wherein the reflecting mechanism comprises a swingable reflecting mirror

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- {claims 9, 16, 17} detection means for detecting a light quantity, and light quantity control means for controlling an irradiation energy amount on the basis of the detected light quantity

Matsumoto et al discloses "The laser emitter unit 146 includes elements such as...polygon mirror and the like well-known in the art..." It is not explicitly stated that the reflecting mechanism comprises a swingable reflecting mirror. However, in light of the language "and the like well-known in the art," it is clear that the disclosed polygon mirror can also serve as a rotating (and thus swingable) reflecting mirror. This is well known to one of ordinary skill in the art. An example is shown above in Nishitani.

Imakawa discloses an optical detection and light quantity control means (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Imakawa into the invention of Nishitani. The motivation for the skilled artisan in doing so is to gain the benefit of optimizing the amount of energy used depending on the situation at hand.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kawasumi (JP Pat 59133058 A) discloses an ink dryer for printed matter.

Tsukada (JP Pat 61268466 A) discloses a recording device.

Rodi (US Pat 4991506) discloses a device for drying printed products in a printing machine.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148.

The examiner can normally be reached on 8:30-5 Monday-Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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10/31/05
MANISH S. SHAH
PRIMARY EXAMINER